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THE EDUCATIONAL SYSTEM

PRIMARY EDUCATION

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SECONDARY EDUCATION

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THE UNIVERSITIES

By AMARANATHA JHA

ADULT EDUCATION

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TECHNICAL EDUCATION

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To call this pamphlet 'The Educational System' implies perhaps more integration and uniformity than is to be found in India, where the British Indian provinces and Indian States have all been free to develop their own systems for many years. After reading these papers the dominant impression left in one's mind is that more integration is necessary. A vast expansion of primary and adult education is overdue, secondary and university education require modification, and technical education has still to be developed. For all these purposes, there seems to be the need for a central co-ordinating authority, with power to implement its plans.

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I. THE BACKGROUND

India's Traditional Love of Learning

INDIA has been a land of learning throughout the ages, not indeed in the sense that education has been universal or very widespread, but in the sense that learning has always been very highly valued and the learned man has been held in even higher esteem than the warrior or the administrator. The close association, in ancient India, between the priestly classes and the duty of education gave the latter a religious rather than a secular significance. During the Muslim period, too, the intimacy of relationship between religion and learning remained intact, and education never became merely a means for earning a livelihood. It was, in some ways, limited in its scope but it was certainly a more integral part of culture than is the case today — taken up by the teachers, generally, as a labour of love and by the students as part of their training for culture and citizenship. The idea of passing examinations and taking degrees and certificates with the definite and declared object of securing entrance into Government service was practically unknown. As in the rest of the world, it is a feature of much later growth, when political and technical developments made certain branches of knowledge and skill marketable commodities. There was no state-controlled and state-financed system of education as is the case in all modern civilized countries today. Education depended partly on private effort motivated by philanthropic considerations, partly on the benefactions of wealthy people who were religiously inclined, and partly on royal patronage, which varied, of course, with individual rulers. As the educational organization was loose and informal, it is not

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possible to speak with any statistical certainty about the extent to which facilities for primary (or higher) education were available in India during the ancient or medieval ages. We know definitely that during many luminous periods of Hindu history as also during the Pathan and Mogul periods there was a fairly extensive network of secular and religious schools in the country.

Education before the East India Company

It is difficult to say what the exact state of affairs was in the period immediately preceding the rule of the East India Company. One school of thought—perhaps prompted, consciously or unconsciously, by the desire to throw into bright relief the British period of Indian history—has attempted to prove that when the East India Company stepped into the Indian scene the country was plunged in veritable educational darkness and that, partly on account of the indifference of earlier rulers and partly on account of the wars and the generally unsettled political condition of the preceding decades, no adequate or satisfactory arrangement existed for the education of the people. This view has, however, been seriously challenged by another school of thought which includes Europeans like Dr. Leitner (Director of Public Instruction in the Punjab) and Keir Hardie. They hold that, even at that time, there was a very widespread network of indigenous schools all over the country, that the percentage of literacy was much higher than today, and that it was the lack of proper integration or the uncontrolled conflict between the old and the new systems of education which brought about the rapid decay of the former. On the authority of Max Müller, Keir Hardie has expressed the opinion that before the advent of the British there were as many as 80,000 schools (*maktabs* and *madrassas*) in Bengal alone—which averages out at a

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school for every four hundred persons—and that in most villages a majority of people could read and write. With the breakdown of the old system, the village schools gradually disappeared and illiteracy swept the countryside apace. In the absence of reliable statistical data, it is difficult to adjudicate authoritatively between these contradictory views, but, on the basis of the evidence that is available, there is no reason to believe that the pre-British period was either educationally obscurantist or indifferent to the educational needs of the people.

Under the Company's Rule

What, however, of the educational efforts and policy of the East India Company? During the Company's regime, the question of primary education did not figure at all prominently before the Directors and, in the early stages at least, it was definitely ignored. The Directors were naturally more concerned with the size of their dividends than with the provision of educational facilities for a people whose culture and psychology they did not fully understand or appreciate. There was, however, a small group of Englishmen—men like Charles Grant and Wilberforce—who *were* in favour of providing educational facilities in India; but their motives were somewhat mixed. They believed that education would make for ordered progress rather than sweeping, revolutionary changes, as ignorant and illiterate masses are more inflammable material for the political agitator. Again, as Charles Grant argued in his pamphlet, dated 1798, the propagation of English education is desirable because it would 'eradicate the superstitions and falsehoods inherent in the religious thought and philosophy of the Indian people', and consequently impress upon them the superiority of Western culture and religion. The redoubtable Lord Macaulay also lent his support, later, to this narrow-minded and somewhat conceited view. But the

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curious fact is that the Directors of the Company were stoutly opposed even to the bill introduced by Wilberforce in Parliament in 1792, advocating that Christian missionaries and educational workers be sent out to India. They apparently considered discretion to be the better part of valour and were afraid that even these missionary efforts might result in political awakening and unrest, and that the unpleasant experience of the American colonies might be repeated in India's rich and obliging land. Little wonder then that even the modest efforts of the interested Englishmen to bring English education to India remained fruitless for many years.

As the years rolled on, there was a growing consciousness on the part of the new rulers, aided perhaps by public pressure, that education is an important responsibility of the state which could not be indefinitely evaded. But things moved at an exasperatingly slow pace. In 1813, the magnificent sum of one lakh of rupees was sanctioned in the Budget, for the first time, for educational purposes but even this amount was not fully utilized for ten years. From 1824 onwards, two or three lakhs were annually spent on education, but obviously such expenditure could not go far to meet the educational needs of millions of people. The Education Dispatch of 1854 made a more serious attempt to tackle the problem. It recommended the extension of primary education through the direct instrumentality of the state, as well as the encouragement of private schools through grants-in-aid. But the proposals did not cut much ice, because the resources available were ridiculously meagre as compared to the magnitude of the problem. Moreover, the Government of the day as well as some influential, and otherwise far-sighted, Indian leaders like Sir Syed Ahmad Khan had pinned their faith in what has come to be known as the Filtration Theory of education, i.e. concentrate on

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higher education and the education of the upper classes and they will, in their turn, naturally and inevitably, provide for the education of the masses. Education percolating down from the top, as it were! If political conditions had been different and intimate contact had existed between the classes and the masses, there was some likelihood of the filtration process being set in motion. As it was, this attempt to build a topheavy, inverted pyramid failed signally as an educational policy for an enormous and predominantly illiterate country.

The Beginnings of an Educational System

The Hunter Commission of 1882 surveyed the educational situation again and made as many as 36 recommendations on primary education, some of which were quite unexceptionable. But the Report lacked vision and a proper appreciation of the magnitude of the problem and there was not even a distant indication of the possibility of universal primary education. It recommended that 'the strenuous efforts of the state should now be directed to primary education *in a still larger measure than heretofore*'. The 'still larger measure' sounds amusing, if it is not meant to be ironical. The Municipal and District Boards were directed to institute school funds out of which part of the expenditure on primary education was to be met and grants-in-aid were to be based on the pernicious system of 'payment-by-results'. Even these recommendations were not vigorously or effectively implemented, and the nineteenth century closed in an educational stalemate.

While the rest of the world was going full steam ahead in the educational field during the early decades of the present century, the policy in India continued to be characterized by the same fatal gradualness as before. In 1904, a Resolution on Indian Educational Policy was conceived and published by Lord Curzon, in which the Government of

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India went so far as to 'fully accept the proposition that the active extension of primary education is one of the most important duties of the state'. As an earnest of the seriousness of their purpose, the Imperial Government grant to education for *all* the provinces was raised from forty to seventy lakhs of rupees—a staggering increase if compared with the 1813 grant of one lakh, but staggeringly inadequate if judged against the magnitude of the country's educational needs. Some idea of the size of the problem can be gathered from the sobering fact that in 1907 only 36 lakhs out of 180 lakhs of boys of school-going age were actually at school, i.e. 80 out of 100 boys had no schooling whatever—good, bad or indifferent—and 'being at school', as we shall see later, is by no means synonymous with achieving literacy! This leaves the girls entirely out of the picture, as their percentage of literacy was still to be computed in decimal fractions.

The Demand for Compulsion

The first definite and vocal demand for the introduction of compulsory primary education was made by Mr G. K. Gokhale in 1910 when he moved his Resolution in the Imperial Legislative Council and followed it up next year with his Compulsory Education Bill—a modest bill, well within the scope of the English Education Act of 1870, in which he only asked that 'a beginning be made in the direction of making elementary education free and compulsory'. In the course of his speech he made it perfectly clear that nothing but compulsion would meet the needs of the situation.

'The Government of India are committed to a policy of mass education, and the rate at which we have been going for the last 60 years is hopelessly slow. Even at the accelerated pace of the last ten years, it will take an

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enormously long period for every boy and every girl to be at school. Moreover, this does not take into account the natural and necessary increases of population in the country. . . . India must profit by the example and by the experience of other civilized countries. And other civilized countries have come to only one conclusion in this matter, and that is that the state must resort to compulsion in order to secure universal education for the people. . . . Once a beginning is made, the public mind in the country will be rapidly familiarized with the idea of compulsion, and it will then not take more than 20 years at the outside to have a system of universal education in the country in full operation.'

But the bill was opposed by all official members and some of the non-official members and was defeated by 31 votes to 13—all honour to the 13! The reasons given by the official opposition were plausible, some of them even valid: there was no popular demand for it; the local Governments did not favour the idea; a minority (!) of the educated Indians were opposed to it; and there was *still* room for the extension of primary education on a voluntary basis (room, of course, and to spare). The point to be noted, however, is that these arguments could commend themselves only to those who were opposed *ab initio* to the principle and the ideals underlying the bill and who were not prepared to face all its financial and administrative implications and difficulties. It was a crucial test of the lip-devotion to the cause of education, and neither the officials nor many of the non-officials emerged well out of it. The entire episode ended in yet another Resolution (1913) containing many useful suggestions about details and many pious platitudes. But the entire upshot was that the expansion of primary education was still to be attempted through the instrumentality of Local Boards, supplemented by grants-in-aid to encourage private effort. The Government still fought shy of assuming direct responsibility for this basic national service.

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Primary Education Acts

Meanwhile the Great War of 1914-18 was fought and won. It brought in its train many disasters, but also a promise of political reform culminating in the Government of India Act of 1919, which incidentally stimulated interest in education. During the years 1918-20 the various Provincial Governments passed a crop of Primary Education Acts which may be regarded as the nearest approximation so far achieved to the ideal of introducing compulsory primary education in the country. They differed in details, but the general outline is the same. The Acts gave the Municipalities and the District Boards the authority to introduce, *at their option*, compulsory education between the ages of six and ten within any part of their jurisdiction after obtaining Government sanction for the purpose. In most of the provinces it is contemplated that this education will be free, but in some like Bengal it is thoughtfully laid down that it '*shall not ordinarily be free*'! Thus the introduction of compulsion is still left to the discretion and initiative of local bodies and, considering what their financial resources generally are and how much forceful initiative can be reasonably expected of them, it is obvious that these Acts could not be the harbingers of any radical or revolutionary programmes. They failed to solve the problem of mass education.

II. SOME PROBLEMS OF PRIMARY EDUCATION

The Magnitude of the Problem

When we come to examine the outstanding problems of primary education in India, the first point that confronts us is its sheer magnitude. India is now a country of about 400 million people and the population grows apace. In spite of the greatly increased funds and attention devoted to the problem during the last few decades, we have not even

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touched the outer fringes. At present only 14 per cent of the boys and girls of school-going age are under instruction, and even this percentage must be heavily discounted, for a variety of reasons, in estimating literacy. There is, firstly, the problem of wastage. Only 26 per cent of the boys and 13 per cent of the girls on the roll of the primary schools manage to reach Class IV, and considering that even after five years' schooling students fail to achieve permanent literacy—to say nothing of other more important educational objectives—the rest of the boys and girls can be easily left out in calculating effective literacy. The following figures reveal, for example, a tell-tale picture of the classwise enrolment in the primary schools of Bengal and show the paralysing incidence of wastage:¹

Infant class	Class I	Class II	Class III	Class IV
21	6.5	4.5	2.0	1.5

This means that only 7 per cent of the children get to Class IV, while the rest fall by the wayside, and that the educational machinery is like a 100-horsepower engine working with 7 per cent efficiency. This makes educational expenditure unprofitable, educational effort ineffective and schools inefficient. It is the despair of teachers, inspecting officers and educational administrators and, unless radical steps are taken to check it, no schemes of reform can have any chance of being successful. Again, while literacy has been slowly increasing, the population has grown more quickly, and it is a moot point whether, at this rate, the increase in the total number of literates can keep pace with the increase in the number of illiterates. In 1881, the percentage was reported to be 3.5 per cent, in 1931 it had risen to 8 per cent, i.e. by 4.5 per cent. According to this depressing basis of calculation, it will take the country, at the present rate of progress, about one millennium to achieve 100 per cent literacy.

¹ J. M. Sen, *Primary Education Acts*.

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Looked at from the point of view of expenditure to be incurred, the position is no more encouraging. According to the latest figures available, we spend about ninety million rupees annually on education from all the various sources—Government, Local Boards, income from fees, etc. On a *conservative* estimate the total recurring expenditure on primary education on a nation-wide scale is likely to be about 300 million rupees, without counting the capital cost to be incurred on buildings and equipment—conservative, because it is calculated on the basis of an average annual expenditure of Rs. 8 per boy and Rs. 10 per girl, which is ridiculously low as compared with the corresponding cost in educationally advanced countries.

The Inevitability of Compulsion

No approach to the problem of primary education is worth anything which ignores this quantitative aspect. The greatest tragedy of the Indian educational policy has been its lack of vision and far-sightedness, a failure to realize that no palliative measures but a tremendous nation-wide crusade alone can meet the situation. What Great Britain was doing in the field of education three-quarters of a century ago still defines the boundaries of the official policy, and the introduction of compulsory, universal education is still looked upon as a desirable, but a very distant, dream. Our survey has, however, shown conclusively that much cannot be achieved either through the mythical process of filtration, or through the encouragement of private enterprise or the establishment of state schools in selected localities or even through a kind of permissive compulsion. This obstinate fact is now recognized not only by politicians and educationists but also by seasoned, and therefore cautious, administrators. Thus Sir George Anderson has pointed out in his *Report on the Progress of Education in the Panjab (1924-25)*

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that neither economy nor efficiency could be attained without compulsion, which would, on the one hand, reduce wastage and eliminate 'superfluous' and 'uneconomical' schools (by making better planning possible), and, on the other hand, ensure a better chance of achieving literacy by insisting on attendance for a minimum period of four or five years. 'Compulsion is, therefore, an economy and not a luxury which must wait for better times. Every effort should, therefore, be made to introduce it as rapidly as possible.' But while the realization is clear, it has failed to find expression in any long-range plan of expansion inspired by imagination and sympathy.

Further it must be realized that to make compulsory education a success, it is absolutely necessary to make it entirely free. I am always surprised at those who demur at this demand and fail to realize that, if in the richest countries in the world like England and the U.S.A., mass education is not only free but there are many additional facilities like midday meals for children, free medical service, scholarships on a generous scale and, in certain cases, even maintenance allowance for parents, a poor country like India cannot expect her people to pay directly for the education of their children. If mass education is considered as an avoidable luxury or, at best, an act of philanthropy, it is right to think of ways and means of reducing expenditure by restricting its scope and fighting shy of its essential financial implications. But if education is a fundamental civic and human right and basic to the health of the body politic, funds *must* be found for the purpose, whatever the cost of the scheme. Perhaps it is ultimately a question of values. If we consider educational and cultural activities to be as important as wars or the civil services, funds will be forthcoming—not easily, by any means, but through the adoption of a many-sided programme of national planning and economic and industrial reconstruc-

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tion. If not, there will always be plausible and apparently unassailable arguments and statistics to prove that it is impossible to introduce free, compulsory and universal primary education in this country.

Reconstruction of Primary Education

So much for the organization or the framework of primary education. We must now turn to its other equally important aspect: its contents and ideology. It is a debatable point whether poor and defective education is in any way better than no education at all. And, for various reasons, our primary education has been meagre, ineffective and uninteresting. It has neither quickened the minds nor enriched the life of the students. Cramped within the narrow compass of the traditional academic subjects and certain technical skills, it has neither been based on the psychology of the child nor responsive to the needs of national life. The future of education cannot be better than its depressing past unless we can reconstruct radically the curriculum, the methods and the whole atmosphere of the primary school, on which rests the entire educational superstructure. If the work of this school lacks life, reality and the touch of imagination, nothing can guarantee the health of the educational system as a whole.

The Balance of Theory and Practice

Along what lines should this reconstruction proceed?

In the first place, we must redress the defective balance between theory and practice in our schools. While life is practical, pragmatic and constructive, the school is a place of bookish learning. When the child enters the school, there is an abrupt and upsetting split in his life because of the conspicuous lack of continuity between the home and school atmosphere. On account of its predominantly academic approach, the school fails to train its students for the practi-

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cal demands of an active, social and productive life. A village boy, who has to find his livelihood and his life interests in agriculture and allied types of manual work, does not become a better farmer or a better citizen by receiving stereotyped instruction in the three Rs, which are often divorced from the concrete realities and the pulsating life and problems of his environment. The real object of primary education is not to wean away the children from their rural surroundings or the normal preoccupations of the village community but to enable them to take their place in village life with greater intelligence, understanding and appreciation. The ordinary run of our primary schools fail to achieve this object not only because their curriculum is narrow and one-sided and their methods passive and unliberating but also because they lack adequate accommodation and equipment and work under such adverse *material* conditions that it becomes impossible to create any traditions or tastes or truly educative atmosphere in them. Many of the social and artistic aptitudes of children wither away because they never get any chance for self-expression, and the country suffers an incalculable loss of talent and creative capacity.

The Widening of the Curriculum

It would not be true to say that no attempts have been made to improve methods or to enrich and modify the curriculum during the last few decades. To remedy the artificiality that broods over the work of the primary school, new subjects have been introduced: manual training, nature study, rural science, agriculture, drawing, etc. Schools with a rural bias have been opened and books have been written with an eye to the needs and interests of village children. A few progressive schools have flirted with the Project Method and the Dalton Plan and other modern methods. But these reforms have unfortunately failed to revolutionize

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educational ideology and technique because, generally speaking, piecemeal changes and modifications have been introduced into the set framework of the existing system—as if life, which is dynamic and free, could be forced into preconceived, outworn and unsuitable moulds! What is really needed is an almost exactly opposite approach. Study life—its needs and demands and problems; study the child—his mind, his instincts, his emotions and his interests, and then devise a system of education that will ring true on these two complementary counters. Life is the great denominator; education must be reduced to its living terms.

Basic National Education

The scheme of Basic National Education, with which is associated the name of Mahatma Gandhi, is perhaps the most significant and radical attempt so far made to reconstruct primary education from this point of view. I can touch here only very briefly on its most salient characteristics. Firstly, the scheme attacks the problem boldly instead of postulating timid and gradual approaches. It asks for the introduction of *free and universal primary education, on a compulsory basis*, throughout the country. It is not content with a 4- or 5-years' course but insists on a *7-years' course* from the age of 7 to 14 in order to ensure that the children at school will not only acquire effective and abiding literacy but will also be mature enough to understand and appreciate social problems and develop social habits and attitudes. This education is to be *basic*, i.e. related to the basic interests of the child mind and the basic occupations of community life. And, as the mind of the child is an active, pragmatic and social organism and the life of the community is sustained through various types of craftwork, education, too, must centre round some suitable *basic craft*, chosen with due regard to the occupations of the

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locality. This craft is not to be just another subject like manual training: it is the pivot of the entire teaching, to which all the other subjects are to be *correlated*. As the craft is practised and its 'why and wherefore' studied with care, problems will arise and questions press themselves on the child's attention and, in tackling them and following up their ramifications under the tactful and unobtrusive guidance of the teacher, the child will gradually find his way into the domains of history, geography, science, etc. Thus education, starting as a unified and integral activity, will lead him into ever-expanding regions of knowledge. Such an approach to the unlocking of the child's mind and creative powers is more effective and fruitful not only because it enlists the powerful support of his instincts but also because it offers opportunities for co-operative and group work in school and thus establishes lines of liaison between life in school and outside. It bases his education on the bedrock of productive work, which is as essential for moral and social training as for the training of practical aptitudes.

Thanks to the impetus given to the scheme by Mahatma Gandhi, it got a promising start in 1938—in spite of the objections of the academicians and the financial and administrative difficulties—and, but for the political impasse that ensued soon after, it would have made much greater headway. Even as it is, it has passed through the most critical stage of early experimentation and trial and, although many modifications and adjustments of detail will be necessary in the light of growing experience, the fundamentals of the scheme stand justified at the bar of informed educational opinion. Not, indeed, that the approval is unanimous—what radical scheme can claim that impossible reception?—but the movement has certainly received a gratifying measure of support, in some cases from entirely unexpected quarters.

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It may be difficult to predict its exact future but it is certain that it will exercise a powerful formative influence on the shaping of our educational policy and it will not be possible for any intelligent educationist of the future to think of primary education in terms of the needs of upper and middle classes only or to envisage the primary school as mainly a place of book learning, unrelated to the socio-economic situation and its future as visualized by men of intelligence and foresight.

Educational Reconstruction as part of National Reconstruction

Is it possible to implement this or any other radical scheme of mass education in India? Obviously, the mere framing of an ambitious programme is no *ipso facto* guarantee of its practicability, as it does not offer any solution of the undeniable financial and administrative difficulties. This is an irritating question—irritating in the sense that it either ignores the modern educational history of many other countries which have achieved, in spite of being almost equally handicapped, the seeming miracle of a reasonably well-organized system of mass education, or because it implies the assumption that the people of this country are stamped by a specially designed inferiority which makes them incapable of achieving what others have achieved. If, within a period of 40 years, the U.S.A. could increase the percentage of literacy in the Philippines from 2 to 55 per cent, if within 20 years the Union of Socialist Soviet Republics could reduce the illiteracy of its backward and widely scattered population from 78 to 8 per cent, if China and Turkey, struggling against the heaviest of odds, could tackle this problem with noticeable success, is there any reason, in the very nature of things, why India should be unable to do so? There is, however, one necessary condition which will

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have to be fulfilled if this tremendous task is to be done; it postulates the organization of an enthusiastic educational crusade, on a nation-wide basis, which would sweep away alike the people's indifference and the administrators' hesitations and timidity. This cannot, however, be generated in a vacuum; it must be part of a much greater movement for the radical reconstruction of the socio-economic structure of the people's life, arising out of the impulse of national freedom. That is why I feel convinced that the educational problem of India will not be solved till the political problem has been satisfactorily solved, till India is not only politically free but, like the U.S.S.R., utilizes its freedom for fashioning a society based on social justice and planning its economic and industrial life on rational lines. That alone can stimulate the enthusiasm and guarantee the men and the money, the spirit and the sacrifice necessary for this stupendous task.

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THE secondary, or high, school in which English is taught and in which, until recently, English was the sole medium of instruction, is Britain's most distinctive contribution to modern Indian education. It has a long and interesting history which goes back far beyond Macaulay's Minute and it is in the light of this history that its present position, as the backbone of the whole educational system, is most easily intelligible. Some authorities trace its origin to the early efforts of Christian missionaries, belonging to different countries and to different Protestant denominations. Another school of thought is inclined to regard the modern secondary school as the direct descendant of the private seminaries which sprang up, chiefly in Calcutta, in the late eighteenth

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and early nineteenth centuries to meet the demands of Indians for a knowledge of English. It is generally agreed, however, that missionary as well as private enterprise preceded by several years any serious attempt on the part of the Government to provide English education for the people of India. It is also agreed that the first person to formulate an elaborate scheme for the introduction of a widespread system of English education was Charles Grant, who retired from the Company's Service in 1790 and subsequently became a Member of Parliament and Chairman of the Board of Directors. He was fired by evangelical zeal and greatly influenced by what Schwartz had done in Madras for the improvement of the people. Backed by the Clapham Sect and by several missionary societies he succeeded, after more than twenty years of strenuous effort, in having an educational clause inserted in the Charter of 1813; this authorized the Company to make a small allotment from public funds for the 'revival of learning' (presumably Oriental) and the 'promotion of scientific knowledge' (presumably Western). This clause marks an epoch, because it is the first legislative admission of the right of education in India to participate in public revenues and because it started the controversy between the Anglicists and the Orientalists which agitated Bengal for many years to come. In 1814 the Directors issued their first educational Dispatch, which puzzled the authorities in India. In the first place it was so vaguely worded that it was difficult to make out what exactly were the intentions of Parliament; secondly, the suggestion that the support of education was a duty resting upon the state was considered not merely quixotic but even dangerous. For years past the Government in India had been pledged to the principle of *strict religious neutrality* and were reluctant to do anything which might be regarded as an interference with the religious beliefs or practices of any section of the people; they were frankly

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suspicious of the wisdom of the decision to promote the moral and religious improvement of India, for they were well aware of the evangelical inspiration that lay behind it. The easiest way out of the difficulty was to ignore the Dispatch and to adopt a policy of masterly inactivity.

When a Committee of Public Instruction was set up in 1823, it was decided that the limited funds available should be devoted to the encouragement of Oriental learning, which had behind it the sanction of religion and traditional associations dear to the people. Since the time of Warren Hastings the Company had maintained a few Oriental Colleges, such as the Calcutta Madrassa and the Hindu College, Benares. These had been established for administrative reasons—for the training of upper-class Mohammedans and Hindus for responsible judicial work—and it was believed that the patronage extended to them by the Government would conciliate the more orthodox and influential members of each of the two great communities. Even if no funds had been made available for educational purposes, these institutions would have continued to enjoy Government patronage. The new Committee proposed the establishment of additional Oriental Colleges, whereupon Ram Mohan Roy, the most enlightened Indian of his day and himself a Sanskrit scholar, wrote a letter of protest to the Governor-General urging the Government to encourage the advancement of modern scientific knowledge. His protest went unheeded and the Committee reported to the Directors that there was no demand for Western culture and that a knowledge of English was not among the sensible wants of the people.

This verdict is all the more remarkable because the phenomenal success of the Hindu College (or Vidyalyaya) was known to everyone in Calcutta and this institution, even at the time, was in receipt of financial aid from the Government. The College had been founded in 1817 by

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the united efforts of David Hare, an English watchmaker and philanthropist, and Ram Mohan Roy, the acknowledged leader of liberal Indian opinion. It was an entirely secularist institution, intended to impart Western knowledge to Hindus of good family, and English was employed as the medium of instruction in the higher classes. Owing to the failure of a bank in which its funds (collected by private subscription) were deposited, Hare approached the Government for assistance and so the College (which developed into the Presidency College in 1855) came under Government control—partial in the beginning. Conservative Hindus viewed with misgivings the secular education which the college imparted, and the extravagant behaviour of some of the students alarmed the Committee of Public Instruction. To counteract the influence of the Vidyalaya, Duff founded his equally famous English College in 1830 and, despite the fact that he made religious teaching obligatory, this institution was soon filled to overflowing (no fees were charged) by enthusiastic young Hindus who were anxious to qualify themselves for honourable, albeit worldly, careers. Some years before, Munro in Madras (1822-6) and Elphinstone in Bombay (1823-7) had urged upon the Directors the desirability of encouraging higher English education among the *upper* classes and they had insisted that it was the duty of the Government to train the natural leaders of the people to occupy responsible administrative posts. The anxiety of the sons of middle- and upper-class Hindus to obtain safe and lucrative employment and the desire of the Company to recruit, at cheap rates, efficient Indian officers go a long way towards explaining the growing demand for English education. In spite of the short-sightedness of the Committee, who advocated caution and the expediency of conciliating learned *maulvis* and *pandits*, the Directors, who were influenced by Mill, came to the conclusion (1830) that higher

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English education was deserving of all the encouragement which the Government could give it, because it was calculated 'to raise up a class of persons qualified by their intelligence and morality for high appointment in the civil administration of India'. It is clear that long before Macaulay penned his once famous, now infamous, Minute the die was cast in favour of English education. Macaulay's championship came late and his glib condemnation of Oriental learning was not necessary to convince Bentinck that in future all funds available for educational purposes should be devoted to the maintenance of schools and colleges devoted to Western, but secular, learning to be imparted through the medium of English.

When the facts are squarely faced, Macaulay cannot be held responsible for having imposed an alien culture upon an unwilling India; on the other hand, some credit is due to him for having settled a long-standing dispute and for having confirmed the Governor-General in his opinion that a small allotment from public funds could legally be spent on the promotion of Western learning. It must be conceded that he had no doubt in his own mind that English was of greater cultural value and of greater practical use than Sanskrit or Arabic, or even Persian; also, like many others of his day (including Indians), he believed that the spoken languages were too crude and undeveloped to be suitable vehicles for the communication of modern knowledge. His advocacy of higher English education was based on the assumption that if the upper classes were given facilities for the acquirement of modern knowledge, such knowledge would gradually percolate down to the masses. This is the well-known filtration theory which amounts to little more than this: 'Educate the classes and the masses will look after themselves.' This, of course, is absurd and the students, mostly Hindus, who enrolled themselves in English schools and colleges were not inspired by any zeal to educate or uplift their more unfortunate fellows—

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they were too much engrossed in their own affairs and bent on satisfying their own ambitions. Even under Muslim rule Government service had been largely monopolized by Hindus; being wise in their generation, they now abandoned the study of Persian and learned English instead. Small blame to them if they regarded Western education as essentially vocational and embarked on the study of English much in the same spirit as young persons of today might take a course in shorthand or typewriting. This attitude was encouraged even by the Government: in 1837 it was decided that English and the spoken languages of the country should supplant Persian in the law-courts, and in 1844 Lord Hardinge issued a Proclamation announcing that young men educated in English institutions would be given preference for appointment to Government service. These administrative measures gave a considerable impetus to the spread of English education. The Government's policy appears to have satisfied an influential body of advanced Hindu opinion, though it was repugnant to Muslims and strongly condemned by English administrators whose opinions were entitled to respect. Unfortunately, exact figures for the twenty years following 1835 are not available, but it is known (i) that when the Hoogly College was started (1837) no less than 1,200 applications for admission were received within the first three days; (ii) that the number of English schools controlled by the Committee of Public Instruction rose from 28 in 1843 to 151 in 1855, while the number of pupils increased in the same period from 4,632 to 13,163; (iii) that prior to 1854 the Government had established an English school in each district headquarters town (save one) of the Bombay Presidency. With the rapid growth of English schools and colleges (there was no clear line of demarcation between the two), Oriental Colleges lapsed into a state of suspended animation, while primary education, except in Bombay and

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the new North-Western Provinces, made little, if any, headway. The ever-growing enthusiasm for English education seemed a sufficient justification for the anglicizing policy which the Government, with some reluctance and after considerable hesitation, had finally adopted.

The issue of Wood's Dispatch (1854), 'a bold, farseeing and statesmanlike document' which is still the basis of the Indian educational system, disturbed the complacency of all concerned. Among many important recommendations it proposed the introduction of a well-articulated system of education from the elementary school upwards, the creation of a Department of Public Instruction in each major province, the institution of a system of grants-in-aid and the foundation of universities (on the London model) in the Presidency towns. The recognition of the importance of primary education is a welcome departure along new lines and implies a repudiation of the old and pernicious theory of downward filtration. The main objective, however, was still 'to extend European knowledge throughout all classes of the people' and this was to be imparted to the upper classes through the medium of English and to the masses through their own spoken languages. As far as higher education is concerned, the most important recommendation was the establishment of universities. This proposal caught the popular imagination and English education became more popular than ever before. High schools and colleges increased with unprecedented rapidity and students, mostly middle-class Hindus, flocked to them in their thousands. As a result, almost all the money available for the educational needs of a vast population was spent on higher English education and the claims of elementary education were conveniently shelved.

It is little wonder that the Hunter Commission were quick to realize that the system had become topheavy and, to

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redress the balance, they recommended the gradual withdrawal of the Government from the field of higher education and its transference to semi-official and private bodies, which were to be given liberal grants-in-aid. The main object of these proposals was to curtail Government's expenditure on secondary schools and colleges and so provide more money for the spread of primary education, which was held to have 'an almost exclusive claim on public revenues'. In order to encourage the establishment of private high schools and colleges, they went so far as to recommend that these institutions should charge fees lower than those charged in similar institutions controlled by the Government. These proposals, plausible on the surface, had certain effects which were never intended: they led to the multiplication of inefficient secondary schools and colleges, miserably staffed and inadequately equipped. By their terms of reference the Commission were precluded from dealing with the universities, but one of their most important recommendations indicates that they viewed with alarm the stereotyped literary education imparted in high schools already dominated by the requirements of Matriculation: they proposed that in the upper classes there should be bifurcation, 'one division leading to Matriculation and the other of a more practical character to fit youths for commercial and non-literary pursuits'. The Government gave this recommendation their blessing, but took no steps to implement it, even in their own schools, while private, including missionary, institutions were unable to meet the expenditure involved by the provision of modern equipment and the employment of expert teachers. It was certainly difficult to go against the tide of popular enthusiasm, and the educated classes still adhered to the traditional view that literary studies were on a higher plane than any sort of practical training. The result was that things were allowed to drift and, as the century

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drew towards its close, the products of the existing system, many of them graduates, found it more and more difficult to find employment; economic insecurity naturally bred discontent and this was fanned by political agitation. Nothing, however, was done to remedy matters until Lord Curzon decided to tackle the thorny question of educational reform. He appointed a University Commission which recommended (1904), as a cure for the tyranny of Matriculation and the evils of cramming, that the standard of entrance examinations should be raised and that candidates should not be allowed to matriculate until they had reached the age of 16; these proposals were popularly regarded as unjust and as a threat to the growing power of the intelligentsia. Another recommendation was that only 'recognized' schools should be allowed to send up candidates for Matriculation—a proposal which led to the framing of elaborate rules governing university recognition; these were laxly administered because the universities had neither the machinery nor the courage to enforce them. In *Resolutions on Indian Educational Policy* issued in 1904 and 1913 the Government of India stated that they were aware of the fact that purely literary courses continued to attract the great majority of pupils and that more practical courses were but little in request. They proposed to introduce 'alternative courses' to meet the needs of those who were destined for industrial and commercial pursuits, to free secondary schools from university domination by setting up S.L.C. examinations (with diversified curricula), and to curtail the use of English as the medium of instruction. These proposals failed to undermine the faith of the intelligentsia in university education; secondary schools of the old-fashioned type grew apace, and the defects of an unwieldy and inefficient system became most noticeable in Bengal. In 1917 the Calcutta University Commission was appointed to investigate the system of higher

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education in that province and to give a lead to other provinces in the matter of educational reform. Two years later the Report of the Sadler Commission was published and it is generally ranked as an educational 'classic'. It exposed, with sympathy and impartiality, the faults of a narrow and examination-ridden system and laid particular stress on the inability of universities to control secondary education, on the rigid uniformity of the literary studies pursued for Matriculation, on the predominance of English and on the inefficiency of teachers and their miserable conditions of service. As far as high schools are concerned, the most important proposals related to the setting up of Intermediate Colleges, the dethronement of English as the medium of instruction and the appointment of well-qualified and well-paid trained teachers. These proposals were accepted, in principle, by the Government, but not carried out to any appreciable extent—least of all in Bengal itself. It is true that the upheaval caused by the Great War, the subsequent wave of economic depression and the political movements which led to dyarchy and culminated in the Reforms of 1937 help to explain the reluctance of the authorities to overhaul a system, which, in spite of its obvious defects, still had the support of the educated classes—including men of advanced political views.

The main defects of the system have been stressed in recent years by the Hartog Committee (1929) and the Abbott-Wood *Report on Vocational Education in India* (1937), which reiterated the necessity of building up a system of education suited to the needs and aspirations of the people and based on the industrial and economic requirements of the country. Various responsible bodies have since given careful consideration to the reform of secondary schools. For instance, the Conference of Indian Universities which met at Delhi in 1934 passed a resolution urging 'the radical readjustment of

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the present system of education in such a way that a number of pupils should be diverted on the completion of their secondary education to occupations or to separate vocational institutions'; such reorganization, it was claimed, would relieve unemployment, ease congestion in the colleges and enable the universities to raise their standards of admission. In 1935 the Central Advisory Board made a comprehensive survey of the existing position and pointed out that 'various considerations necessitated a new attitude towards educational problems; it was resolved that 'a radical readjustment of the present system in schools should be made in such a way as not only to prepare pupils for professional and university courses, but also to enable them, at the completion of appropriate stages, to be diverted to occupations or to separate vocational institutions'. Since then several provincial Governments have drawn up schemes for the introduction of S.L.C. examinations with diversified and practical courses, entirely free from university requirements. Such efforts as have been made to reform a stereotyped system have been cautious and they do not appear to have aroused much popular enthusiasm; old prejudices die hard and it would seem that vested interests will have to be set at nought and academic obstinacy overcome before schools can shake off university entanglements and enjoy the latitude and freedom which are theirs by right. It is a healthy sign, however, that university authorities are beginning to realize that direct preoccupation with schools tends to divert their attention from purely academic concerns, that the Matriculation examination is no longer a reliable test of fitness for higher studies, that colleges are crowded with young people who have no inclination or aptitude for academic work and that a lowering of standards is the inevitable consequence of granting easy admission to unwieldy numbers. Apart altogether from the problems of educated unemployment and

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vocational training, it seems clear that the secondary system needs to be overhauled in the interests of universities themselves, so as to enable them to fill the place in the cultural life of the country which it is their duty to fill. In the meantime, some $1\frac{1}{2}$ million boys and 350,000 girls (of whom nearly one-seventh are attending boys' schools) are receiving an education which is all of a piece, which has no direct bearing on the lives they lead outside their schools and which leads, or rather drives, them to embark on academic work for which the majority are totally unfitted.

When the present position is viewed in its proper historical perspective, it seems reasonable to conclude that the secondary school system suffers from arrested development: it has failed to keep pace with the changes—social and political, economic and industrial—which have gone to the making of modern India, and it has failed to keep abreast of the latest developments in educational theory and practice. Schools are weighed down by the incubus of Matriculation and fettered by regulations governing 'recognition'; courses are bookish and theoretical and provide little to attract pupils with a practical turn of mind; the excessive use of English as the medium of instruction places a severe psychological burden on both pupils and teachers—it stifles individuality, encourages memorization and makes instruction lifeless and mechanical; scientific and practical subjects are neglected and inadequate provision is made for outdoor games and other recreational activities. The whole school system is rigid and inelastic and is characterized by a dull and monotonous uniformity. On the whole, India has been well served by expert advice but, despite the recommendations of various Committees and Commissions, little has been done to adapt an outworn system to the conditions of modern life. Indeed, it is only a slight exaggeration to say that the Indian high school, with a few notable exceptions, is much the same

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as it was in 1904 and but little changed from what it was as far back as 1884. It is abundantly clear, therefore, that the secondary system must be reorganized and made more fruitful; at present, it brings only disillusionment and discontent to many whose abilities and aspirations are deserving of a richer reward.

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HIGHER education was imparted in this country even in the ancient days. There is abundant evidence to show that it was widespread, well-organized, and easily available. It was in keeping with the social framework; it was in harmony with the spirit of men's dreams; it sustained both the spiritual and the material needs of the community. Institutions of higher learning were richly endowed; they attracted scholars from far and near; many of the savants had an international reputation. Taxila, Nalanda, Mithila, Navadvipa, to mention only a few, were centres of learning to which flocked many a youth burning with the desire for light, eager to seek knowledge whatever the cost and however hard the conditions, willing to scorn delights and live laborious days, sitting for years at the feet of the masters, learning as much from oral discourse as from the written word. And after they had finished their course of instruction which included ritual and the holy scriptures, grammar and astronomy, medicine, logic and the different systems of philosophy, and had attained proficiency alike in disputation and in exposition, they went their way, either seeking the patronage of some court or content to lead the humble life of a scholar and preceptor in the obscure corner which was their home. This learning was in the main confined to the privileged Brahmana caste, though instances are not wanting

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of members of other castes attaining real eminence in the world of scholarship. In the middle ages, despite many political changes, the even tenor of traditional learning was not disturbed. At the beginning of the twelfth century there were a thousand monks at the university of Odantapuri, three thousand at the Vikramasila Vihara, and a thousand at Vajrasena (Buddha Gaya). The village *tols* continued to flourish through the centuries, as also the *maktabs*. Education was imparted to large numbers of pupils, who, in course of time, rose to be *pandits* or *maulvis* or held offices of trust in the administration.

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The beginning of English education can be traced to the year 1792 when the Court of Directors of the East India Company debated a proposal by Mr Wilberforce for sending out schoolmasters to India. On that occasion one of the Directors said that 'we had just lost America from our folly, in having allowed the establishment of schools and colleges, and that it would not do for us to repeat the same act of folly in regard to India, and that if the Natives required anything in the way of education they must come to England for it'. In 1813, Parliament ordered that the sum of ten thousand pounds should be appropriated to the education of the natives. Act 53 Geo. III provides in Section 43: 'A sum of not less than one lac of rupees in each year shall be set apart and applied to the revival and improvement of literature, and the encouragement of the learned natives of India, and for the introduction and promotion of a knowledge of the sciences among the inhabitants of the British territories in India.' The Court of Directors in their Dispatch of 1830, said: 'There is no point of view in which we look with greater interest at the exertions you are now making for the instruction of the Natives, than as being calculated to raise up a class of persons qualified, by their

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intelligence and morality, for high employments in the Civil Administration of India. . . . We wish you to consider this as our deliberate view of the scope and end to which all our endeavours with respect to the education of the Natives should refer.' In 1835, Lord William Bentinck published a Resolution in which he said: 'His Lordship in Council is of opinion that the great object of the British Government ought to be the promotion of European literature and science amongst the natives of India, and that all the funds appropriated for the purposes of education would be best employed on English education alone.' The next stage is reached by the publication of Sir Charles Wood's Education Dispatch of 1854. Its main purport was thus summed up in the Report of the Indian Education Commission of 1882:

'It commends to the special attention of the Government of India the improvement and far wider extension of education, both English and Vernacular, and prescribes as the means for the attainment of these objects: (1) the constitution of a separate department of the administration for education; (2) the institution of Universities at the Presidency towns; (3) the establishment of institutions for training teachers for all classes of schools; (4) the maintenance of the existing government colleges and High Schools, and the increase of their number where necessary; (5) the establishment of new Middle Schools; (6) increased attention to Vernacular Schools, indigenous or other, for elementary education; and (7) the introduction of a system of grants-in-aid.'

Sir James Colville introduced the Calcutta University Bill which became Act II of 1857. In the preamble to it occurs the following sentence: 'For the better encouragement of Her Majesty's subjects of all classes and denominations within the Presidency of Fort William in Bengal and other parts of India in the pursuit of a regular and liberal course of education it has been determined to establish a university at

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'Calcutta for the purpose of ascertaining by examination the persons who have acquired proficiency in different branches of Literature, Science and Art, and marks of honour proportioned thereunto.' The University of Bombay was established in the same year, as also that of Madras. The Punjab University came into existence in 1882, and Allahabad in 1887. These five universities continued to serve the country for many years; their jurisdiction was fixed by the Act of 1904. It was not until 1916 that the Benares Hindu and Mysore universities were established. The others followed in quick succession—Patna, 1917; Osmania, 1918; Aligarh Muslim and Lucknow in 1920; Dacca in 1921; Delhi in 1922; Nagpur in 1923; Andhra in 1926; Agra in 1927; Annamalai in 1929; and Travancore in 1937. The Utkal University is about to be established in Cuttack, and there are also proposals for establishing universities at Jaipur and Ajmer, in Sind, Maharashtra and in Assam.

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'We must at present do our best to form a class who may be interpreters between us and the millions we govern, a class of persons Indians in blood and colour but English in taste, in opinions, in morals and in intellect,' said Macaulay. At one time it seemed as though Macaulay's hopes would be literally realized, for the Indians who came out of the universities seemed thoroughly denationalized, looking with contempt upon Indian languages and Indian culture, almost apologetic for not being Christians, aping everything Western, ambitious of even dreaming dreams in English. But Macaulay builded better than he knew, and it is to the education imparted in the universities and to the fact of many Indians having travelled abroad that we owe the inception and growth of the nationalist movement. The first wave of enthusiasm for Western culture having subsided, there grew up a spirit of national self-respect, under

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the influence of which the Indian languages were developed, Indian philosophy was studied, Indian history was re-written, and a wholesome regard for Indian traditions gained strength.

The main functions of a university are the maintenance of high intellectual standards by means of teaching and examining; the encouragement of original research and investigation and addition to human knowledge; the formation of character so that all who come out of a university may bear the stamp of intellectual honesty and moral integrity; the training of youth for their work in life, whether definitely for a vocation or generally for any task that they may be called upon to undertake. No one will claim that our universities have invariably succeeded in performing these functions satisfactorily or in their entirety. But that, within the limitations under which they have been placed, they have justified the hopes of their founders cannot be seriously disputed. What are these limitations? First of all, the older universities were saddled with responsibilities that should not normally fall within the purview of a university. Thus, in the University of Calcutta, in 1940 more than 14,000 candidates passed the Matriculation examination, and about 8,000 the Intermediate examination; in the University of Bombay, in 1938-9 over 3,000 passed the Intermediate examination; in the University of Madras over 3,000 passed the Intermediate examination; in the Punjab University, in 1939-40, over 20,000 candidates passed the Matriculation examination, and about 4,500 the Intermediate examination. This burden of examining schoolboys and students of the pre-university stage must naturally be heavy and prevent whole-hearted concentration on legitimate university work. Secondly, the medium of instruction has all through been English. At one time, this was the medium even in elementary and secondary

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schools. For some time now, fortunately, it has been replaced at the pre-university stage by the Indian languages. But at the university English still continues to be the sole medium both for teaching and for examining. I am far from decrying the importance of English. It is now an international language and it must continue to be studied in this country, both because of its global importance and for its own sake as enshrining a noble literature at the springs of which many Indians have drunk deep and from the loftiest strains of which we have derived valuable inspiration. It will be a sad day when we lose the many advantages we have derived from a study of the masters of English; it is to be hoped that no false notions of independence will prevail to force us to give up what during the last seventy-five years we have learnt from them. But educationally, it is entirely unsound that instruction should be imparted through the medium of a foreign and an exceedingly difficult foreign tongue. It stifles original thinking; it involves very severe mental strain. The inevitable tendency is to test a candidate's ability not on the basis of his knowledge and learning but by the skill with which he uses a foreign language. The languages of India must be the media of instruction. There are, of course, practical difficulties: in some provinces, more than one language will have to be employed; this will involve additional expenditure. It will mean also that students and teachers from other provinces will be under a handicap. In the scientific subjects particularly, terminologies will have to be coined. But all these difficulties will soon be overcome and the result will be the freeing of the young intellect from the incubus of thinking and expressing its thoughts in a foreign language. In the third place, the length of residence at a university has been only two academic years, or twenty months. This is altogether inadequate, and university authorities, as indicated in resolutions of Universities' Con-

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ferences, are realizing the need and importance of a three-years' degree course. The University of Delhi has, under the energetic leadership of Sir Maurice Gwyer, effected this long-due change, and the situation there will be watched with keen and sympathetic interest by all educationists. In the fourth place, the universities have in the main given little thought to moral and religious education. With the exception of the two denominational universities, the others have left the religious aspect of education severely alone. Lastly, it has to be admitted that very few universities have made any endeavour to relate university education to the needs of the masses and they have, unconsciously, produced a large community which in habits and thought and outlook is separated by a very wide gulf from the vast majority of the people.

During the last fifty years, a great amount of valuable work has been done by the universities. Many Indian scientists have achieved an international reputation. Quite a number have written books on philosophy, economics, political science, history, and other branches of learning which have made a mark. Many university men have devotedly served their mother-tongue and helped to enrich their literature. The universities have supplied to the country politicians and statesmen; administrators; civil servants; judges, jurists, and lawyers; engineers and physicians and surgeons; teachers; agriculturists; business magnates—and a host of others who have an honourable place in society. But change and reform are signs of vitality: only a moribund institution can be content to rest on its oars. Circumstances have altered. Old values are challenged. A change is coming over the spirit of men's dreams, and the universities must adapt themselves to the conditions that are arising. They cannot afford to cut themselves adrift from the rest of the community. They should

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remain faithful to their high ideals. Things that are of permanent value—academic freedom; the freedom to seek knowledge and to express frankly the results of patient investigation; the freedom to resist interference from without in the pursuit of learning; the freedom to hold and express opinions; these must be preserved at all costs, or else the universities will fail to justify their existence. But there are certain changes that are desirable and, indeed, inevitable. University education is at present beyond the reach of many brilliant young men, because it is expensive. Whether it can be made cheaper one may question; but it should be the endeavour alike of the state and the university to ensure that no young man of promise who is likely to profit from higher education is deprived of it on financial grounds. Again, the universities must pay more attention to vocational and technical education, without any reduction of the existing facilities for the study of the pure sciences and the humanities. The universities should undertake also Settlement Work, establish literacy centres, have a plan for adult education, and by means of social service associations and leagues get into closer touch with the villages, so that the rest of the community may feel bound and attached to university men and not look upon them, as, alas, they too often do now, as aliens apart and different from themselves. Finally, religion must figure prominently in the curricula. The universities should strive to produce an atmosphere in which crude superstition cannot flourish, moral cruelty cannot be permitted, and social injustice will be a thing of the past. If they can establish harmony in place of discord and order in place of disruption, they will truly be blessed. 'A little generous prudence, a little forbearance of one another, and some grain of charity might win all these diligences to join and unite into one general and brotherly search after truth.'

ADULT EDUCATION

'From hopes for the regeneration of mankind, one passes to a consideration of practical measures required to realize some quite limited social amelioration.'—Sorel, quoted in *The Art of Being Ruled* by Wyndham Lewis.

THE movement for adult education is a modern phenomenon in social development. Its beginnings can be traced to the closing years of the eighteenth century in Britain and to the first quarter of the nineteenth century in the U.S.A., while in the continental countries like Denmark and Switzerland it became a force much later. In more recent times the Government of Russia have taken in hand the task of promoting adult education with their characteristic vigour. Lately China, Iran and Turkey have also concerned themselves with it.

India's adult education movement has barely entered upon the adolescent stage. In a land where only 120 people out of a thousand are literate, the history of adult education is to be looked for in the future rather than in the past. We need not, therefore, dwell upon the sporadic efforts at promoting adult schools in different parts of this subcontinent under the zealous direction of exceptional officials (such as Sir George Anderson of the Punjab). Most of these efforts miscarried for various reasons and were not followed up. They must rank as 'incidents' in our educational annals.

Growing political consciousness has awakened interest in certain aspects of adult education in India—notably in literacy. The blot of illiteracy, almost equally with the stigma of untouchability, has created a certain emotional 'mind-set' among the more awakened sections of the privileged classes and among politicians. The publication of the Reports of the Simon Commission and the Hartog Com-

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mittee and of Miss Mayo's *Mother India*, in the twenties, roused many sensitive souls to a painful awareness of the ignominy of being an illiterate country.

The transfer, in 1937, of considerable power to elected assemblies, whose leaders took office in British Indian provinces, was a landmark in the history of the adult education movement in India and of literacy work. Ministers, moved by patriotic fervour and not altogether unaffected by the desire to do something spectacular to touch the lives of the masses, launched or encouraged literacy campaigns. Governors of provinces, rulers of States, politicians and thousands of humbler but, perhaps, more steady workers in the cause were drawn into a movement which soon assumed national proportions. It was wisely canalized in many areas. It brought together in conference some active workers alive to the necessity of sharing experience and co-ordinating effort. This finally led to the formation of an all-India body, the Indian Adult Education Association. Eight organizations, including the Bengal and Bombay Presidency Adult Education Associations and the South Indian Adult Education Association, are now affiliated to it and others are likely to follow suit.

The Association held an All-India Conference in conjunction with the All-India Educational Conference in Indore in December 1942. Professor Amaranatha Jha, Vice-Chancellor of Allahabad University, is the President of the Association, and its central office is located at Indore.

It has pushed forward the organization of adult education in the southern part of the country through a whole-time Organizing Secretary. Similar plans for the north are under consideration.

An all-India organ, *The Indian Journal of Adult Education*, had already started life in December 1939 from the Friends' Settlement, Hoshangabad, C.P. Today it has a representa-

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tive Editorial Board and is published six times a year in the first week of each even month. It serves the interest of a steady, independent and forward-looking movement in India and is already on the approved list of all Indian Government Educational Departments which maintain such lists.

The stimulus and inspiration which Dr F. Laubach, an American who had done pioneer work in the Philippines, brought to the literacy movement in two visits to India deserves special mention. Perhaps he tended to minimize the immensity of our task: single-minded men often do. But he was instrumental in the starting of much enthusiastic and more or less scientific experimentation. His slogan 'Each One Teach One' has not had a fair deal in our tradition-ridden educational world. His book *India Shall be Literate* is an illustration of the virtues as well as the weaknesses of the Laubach approach.

Most provinces and some Indian States have special Literacy or Adult Education Officers or organizations today. Voluntary bodies continue to labour with devotion though often without adequate knowledge and sense of direction. The fact that the percentage of literates has risen from 8 in 1931 to 12 in 1941—the decennium's increase of 15 per cent in the population notwithstanding—is a tribute to the literacy campaigns carried on throughout India.

* * *

A few of the problems, revealed or latent, in the present situation may now be touched upon. At the outset it must be noted that the country has not yet begun to recognize that adult education must occupy a central place in any scheme of India's advance towards self-realization in the comity of nations and that *comprehensive* provision must be made for it. Educational authorities and institutions of higher learning have either taken too narrow a view of their academic responsibilities or have been too complacent to give a lead in

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the matter. The Government of India have been either pre-occupied with administrative complexities or too little concerned with genuine progress adequately to discharge their responsibilities in the matter. The immensity of the problem has not inspired initiative or persistence on their part. They have remained content to dwell on their difficulties. The beginning made by the Central Advisory Board of Education has been stultified by the consuming passions aroused by the present war. Neither the Government nor, indeed, its vociferous political critics have shown any signs of that foresight to which the Educational Commissioner with the Government of India referred on his return from China. The *Hindustan Times* of 1 June 1942 reported:

An ancient people fired by a proud sense of unity and a zeal to build up a new China, clinging tenaciously to their universities and other centres of education and using them as agencies to build up reserves of brain-power for national reconstruction after the war rather than to prepare manpower for the immediate purposes of the war—that is the outstanding impression brought by Mr John Sargent, Educational Commissioner with the Government of India, who returned this morning from his 20-day visit to China.

The second remarkable phenomenon is the confusion in the minds of educational administrators as to the relative value of children's (primary) education and adult education. The two are looked upon as rivals instead of being viewed as complements to each other, which they are. Educational authorities, both official and non-official, too preoccupied with routine and not infrequently harassed by financial insufficiency, find in this confusion an excuse for their inactivity.

Thirdly, the widespread tendency among the privileged classes to dissipate their zeal in unconstructive talk and ill-

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planned effort constitutes a serious obstacle to rapid advance. And lastly we must refer to the one-sided development of the labour movement in India. 'Labour', both industrial and agrarian, has failed to pull its weight in the struggle for securing educational facilities for the masses. The Indian labour movement would gain immensely by cherishing educational aspirations which have been a source of strength to the co-operative movement, to peasant organizations and to industrial trade unionism in Western countries; it would also make an abiding contribution to national progress.

Local bodies, with noble exceptions—such as the District Boards of Tanjore and Madura, the Corporations of Bombay and (to a lesser extent) Madras, to name some—have on the whole failed to take advantage of popular enthusiasm. Universities as such have not shown much practical interest. Here again, there are exceptions. The Mysore University has led its students in literacy work through the University Union. The Bangalore University Settlement, where students, under the guidance of a whole-time Warden, are encouraged to do practical social work, is still a unique institution in India. The Bombay University is now considering the implementing of a scheme which was put before it some ten years ago by Sir Rustom Masani. Allahabad has been offering its students facilities for theoretical training in social work mainly through a course of forty extension lectures which it has arranged annually for the last three years, while encouraging the literacy work of its Social Service League. Nagpur has adopted a modest scheme of extension work as a beginning. Extension lectures are to be delivered under its auspices by teachers of university standing in Marathi and Hindi—the two languages most commonly used in its area. Students are to be enlisted in this enterprise and a small amount of money has been sanctioned by the

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Executive Council for encouraging needy students to participate in this social effort.

* * *

With the above preliminary considerations in mind we may now take a bird's-eye view of adult education activity in the country. No exhaustive record is possible within one brief section of a short article. I can only indicate the more important types of activity and illustrate them by reference to different parts of the country. It is inevitable that many valuable experiments will find no mention.

Some Figures

Complete figures for adult education work are impossible to obtain, but the following table from the Government of India *Report on Education for the year 1938-39* will be of interest:

SCHOOLS FOR ADULTS, 1938-9

PROVINCE				No. OF SCHOOLS	ENROLMENT
Madras	...	...	...	12	771
Bombay	...	...	...	673	22,095
Bengal	...	...	...	967	28,152
United Provinces	...	...	...	2,689	82,590
Punjab	...	...	...	146	5,201
Bihar	...	...	...	130	2,772
Central Provinces and Berar	...	...	...	43	1,714
Assam	...	...	...	13	505
North-West Frontier Province	...	...	...	...	...
Sind	...	...	...	28	659
Orissa	...	...	...	1	26
Coorg	...	...	...	...	...
Delhi	...	...	...	18	230
Ajmer-Merwara	...	...	...	13	268
				4,733	144,983

N.B.—The figures in this table refer to regular schools for adults, and do not include 'classes' started for adults at various centres.

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The following extract from a communication from the Travancore Government is also illuminating:

‘From the point of view of literacy, Travancore takes the highest place in India, the figures being 47·88 per cent; Cochin coming next with 35·43; Delhi 25·7, and Baroda 23·01.

Among the provinces, Madras, Bombay and Bengal have percentages of 13·01, 19·5 and 16·12 respectively.’

A Bird's-eye View

As already mentioned, most British provinces have been giving some attention to adult literacy work. Assam has established a separate department under a Mass Literacy Officer with an adequate staff. They have carried on effective work for about two years, and in the autumn of 1941 they planned a comprehensive ring of post-literacy circles. It was announced: ‘There will be 1,200 study circles in the Assam Valley and 700 in the Surma Valley. A set of post-literacy readers and fortnightly news-sheets will be supplied to each. Readers, books and periodicals will be issued to the people who have just become literate and to other people. New sets of readers will be supplied to each study circle annually.’ This scheme was worked and improved upon, but Japan's entry into the war has interrupted the effort.

Orissa, where the literacy movement and other forms of adult education have failed to grip the imagination of people and of the Government to the same extent as they have done in some other areas, reported 425 adult education centres with a total of 8,147 persons under instruction during 1940-41. The Government seem to be so discouraged that they had under consideration the further restriction of their activity to a limited area.

In the Punjab, the year 1939-40, ‘which saw a great expansion of the movement, also gave it a slogan. It is:

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"Each one teach one", which rendered into Urdu means: *Parho aur parhao*, says a Government Report.

During this first year of the five-year plan to eradicate illiteracy, the Punjab Government sanctioned a grant of Rs. 22,800 for the purpose. No less than 308,000 copies of primers in different scripts and 56,000 copies of follow-up literature were purchased by the Education Department. The number of males made literate was 50,799.

Attempts were made to use the old type of regular adult schools and adult centres were also started. The number of adult schools increased to 201 and their enrolment to 6,075. The latest figure for those under instruction is 196,123. Adult centres run in accordance with the Laubach method were conducted through divisional, district, *tehsil* and village literacy leagues with the help of volunteers.

The movement is also gaining ground among women. The Lahore circle has 2,836 centres (with 1,565 adult women), and Rawalpindi reports 700.

The Bombay Government were the first to appoint a Provincial Board of Adult Education under a non-official Chairman in 1937. They started with 29 adult literacy classes, and bore all the expenses. Later, however, the Government brought into force a scheme of grants-in-aid. By the end of 1941-2, there were 800 adult education classes on the registered list, though in 1939-40 there were 2,300 classes and 13,200 were made literate. Of the total grant of Rs. 86,000, about Rs. 27,000 was by way of equipment grant. The average cost per literate thus amounted to Rs. 4-8-0.

In view of the heavy cost *per capita*, the Provincial Board recommended a revised rate of grants. This seems to have affected the movement adversely during 1940-41. The Government have, therefore, once again revised their rates and have made a provision of Rs. 1,00,000. Instructions

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have been issued to Inspecting Officers to encourage the opening of classes in larger villages. Government provision for 1942-3 is Rs. 60,000 for village reading rooms and libraries. There are 760 of these registered.

So far as the liquidation of adult illiteracy in Bombay city is concerned, there is a separate Adult Education Committee with a Special Literacy Officer. During 1940-41 the Committee maintained 1,140 literacy classes for adults in Marathi, Gujarati, Hindi, Kannada, Telugu and Tamil. These classes were attended by over 16,000 men and 5,000 women. Of those who appeared for literacy tests, 14,860 were declared to have become literate, while in 1941-2 about 100 post-literacy classes were maintained by the Committee. The Government paid rather more than two-thirds of the Committee's total expenditure of Rs. 64,840.

Sind, under its enthusiastic Education Minister, Khan Bahadur Pir Ilahi Bux, launched a literacy campaign and achieved a good deal during the years 1938-40. On 3 July 1941, the Minister announced in the Assembly that the Government collected and spent Rs. 1,49,017 on the campaign during 1939. The number of persons made literate was 29,995.

Bihar, under the leadership of Dr Syed Mahmud, was perhaps the first to set up an effective Provincial Mass Literacy Committee. It was fortunate in possessing for its Secretary Professor B. B. Mukerjee, and the Bihar Inspectorate included steady workers who were prepared to divest themselves of the usual official red-tape traditions and to throw themselves into the movement whole-heartedly. They built up a movement largely *voluntary* in character. Volunteers of their 'Make Your Home Literate' campaign alone made 24,289 literates in 1941-2.

In April 1938, 1,065,821 adults (including 71,744 women) were made literate, and at the end of March 1941, 625,696

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were attending post-literacy courses. In 1941-2, as many as 203,394 passed the Literacy Test. Bihar claims that one of the important results of this movement has been the stimulation of the demand for primary education in the province and the raising of the average daily attendance in the schools of those areas where it has made headway. It has recently produced a set of 20 posters suitable for literacy campaigns, which are of more than provincial interest. Its adult libraries issued 634,000 books in 1941-2.

Bengal has entrusted adult education to the Rural Reconstruction Department, and only recently has it been decided that this Department shall hold major responsibility for sponsoring adult education in all its stages. The present Director of the Department, Mr S. M. Ishaque, has devoted himself to an examination of the problems involved with singular zeal, and some remarkable progress has been made in spite of wartime complications in that area.

The above will give some idea of the progress of the literacy movement in some of the British provinces. We may now pause to glance at some of the more advanced Indian States.

The Mysore Government have taken a keen interest in literacy work. Recently they set up a Mysore Adult Literacy Council. The Council has a whole-time organizer, who works in close co-operation with the Mysore University Union, which has already distinguished itself for steady and well-planned work during the vacations. Largely under the guidance of the Vice-Chancellor and some university teachers and with very generous financial assistance from the State, the Mysore University Union addressed itself to the task of working through Kannada, Urdu, Telugu and Tamil centres during the summer of 1941, and did a very creditable piece of work.

The Mysore University Settlement, Bangalore, is the only

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settlement of its kind in India. And though it is not possible to agree with all its methods of work, it must be admitted that it offers an excellent training ground for social work under qualified socio-academic leadership.

The State of Jammu and Kashmir has been fortunate in having for its Director of Education a catholic educationist, Mr K. G. Saiyadain. He has given unstinted support to his adult education officer, and the result is the growth of a powerful drive for literacy. Special adult readers have been produced in the Hindi, Urdu and Punjabi scripts. Recently readers in Bodhi for the people of Ladakh district have been published. There are 380 adult libraries in the State, of which 300 are functioning in villages. The average book stock is 200 to 300 books and ranges over many subjects such as health, agriculture, religion and science.

In 1941, 60,169 adults were under instruction in 4,253 centres, while 23,109 persons had been made literate.

The adult literacy campaign in Baroda started in 1939. By the end of July 1941, the total number of classes conducted was 1,795. In all, 26,457 adult literates attended these classes and out of them 9,861 have been successful in attaining the literacy standard fixed by the State.

Adult classes conducted in backward areas or in areas of concentrated effort are paid a monthly contingency grant of Rs. 2 to Rs. 4, and over and above this a yearly lump sum of Rs. 50 can be earned under certain conditions.

Higher Education Authorities and Adult Education

It is a matter for regret that, generally speaking, higher education authorities in India have not learnt to discharge their duty by adult education. The best form of extra-mural work done on any considerable scale by universities is to be found in the system of extension lectures, but they generally fail to draw the type of person who is served by adult

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education departments of universities in the West. Systematic university teaching on the tutorial class level is hardly anywhere attempted under university auspices in India. Indeed, the only organized and systematic tutorial class work is that which began with the enthusiasm of certain Bombay professors as far back as 1922 and which is now affiliated to the Bombay Adult Education Association. Recently, the Nagpur University has decided to make a beginning with an extra-mural department which may well become the model for a new type of adult education service in Indian universities. The Mysore University has made the making of ten persons literate an additional condition for admission to the B.A. and B.Sc. degrees.

Even in the matter of giving guidance in teaching methods, university bodies and Training Colleges have lagged behind in the field of experiment, research and systematization of available knowledge. The running of training courses for adult teachers has been left to voluntary agencies and quite often to zealous individuals. Such courses have been held in Ranchi, in Agra, Gorakhpur, Ghaziabad (U.P.), Kharar and Moga (Punjab), and Tuticorin (South India), Bombay city and in many other places. Madras city has now the distinction of having a Laubach Training Centre, recently organized by some enthusiasts of the South Indian Adult Education Association. The Bengal Presidency Adult Education Association has from time to time organized short training courses. Christian bodies, particularly through missionary institutions, have rendered yeoman service throughout the country in this matter as also in the matter of faithful experimentation with method. Adult literacy now receives special attention through a Standing Committee of the National Christian Council.

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Literature

The problem of providing special literature for adults newly literate in a country where 15 major and 150 minor languages are spoken is a colossal one. Simple libraries and reading rooms have increased throughout India during the last ten years. In the United Provinces alone 5,382,943 visitors to these were reported in 1941-2.

The Indian Journal of Adult Education has published from time to time articles dealing with available literature in different languages. It has also published graded and annotated bibliographies in the Kanarese, Hindi, Tamil and Punjabi languages. It proposes shortly to publish one for Urdu. The Sikh Literacy Association, Amritsar and the Adult Education Department of the Jamia Milia Islamia, Delhi, have rendered useful service to the Gurmukhi and Urdu constituencies respectively.

Various Provincial Christian Councils have led the way in their language areas and have also co-operated with their local authorities in providing both beginners' and follow-up literature.

Voluntary Agencies

The interest that the Government have shown in recent years in adult education generally and literacy work in particular has brought into existence a great many voluntary organizations throughout the country. Their enthusiasm often outstrips their organizing ability and their capacity for sustained work. Many of them, however, render invaluable service both to the cause of adult education and as training grounds in social work for the privileged classes. Special mention must be made in this connexion of students' organizations which have undertaken, in many parts of the country (e.g. Madras city, the Surma Valley in Assam, and Delhi), intensive campaigns and have carried them through

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to a successful conclusion. Students in Bihar and to a lesser extent in the Madras University have taken a good share in literacy campaigns. In South India, particularly in the Andhra country, college students and their teachers took a good deal of interest in peasant classes organized by some leaders of the labour movement. They held schools in which systematic and sustained teaching was given. They managed to rouse, however, the suspicions of the Madras Government, who have passed orders that no adult training school or class shall be held unless the promoters have obtained a permit from the District Magistrate to do so. This has been a most discouraging feature in the history of adult education work in the south.

Conclusion

The preceding section has sought to present a brief account of the various types of activity in the adult education field in India. This account will have shown that though we have to make use of the literacy movement and all its enthusiasm, *we need constantly to remind the country that literacy does not constitute adult education*, but is only one of the important means of furthering it. It will also be clear that universities and Local Bodies need to give special attention to this vast field of service. Each university and each Local Body should have a special officer charged with the duty to sponsor and direct adult education. This, however, is not likely to come on a general scale unless our Provincial Governments appoint competent men of the rank of Deputy Directors of Education as Adult Education Officers. This again is hardly likely to happen till our elected representatives, our Education Officers and our Governments realize that the problem of this country's literacy, let alone its ignorance, cannot be solved by compulsory primary education alone. The study which Mr

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S. R. Bhagwat, Chairman of the Bombay Board of Adult Education, has made of the enlightened city of Poona in this connexion should prove an eye-opener to all concerned. He has established that after ten years of compulsory primary education in Poona, the percentage of literacy cannot be said to have risen appreciably.

Has the Central Government a duty in this nation-building matter? I believe it has. It must give a lead to the Provincial Governments; for no one else can. It must show them that this is a big piece of work which needs to be viewed in a big way. It must produce literature which will awaken the provinces to the possibilities of adult education. It must make available to them in readable form the experience of other countries in so far as it is applicable to India. And last but not least, it must make up its mind to encourage voluntary bodies with grants-in-aid administered under an adequate set of rules drawn up in a broad spirit of educational realism. It should keep before the country the truth that for the success of democratic self-governing institutions, a land so large as India must have a population which can be called educated, that the need for educating our masters is as great in India today as it was in Disraeli's England.

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THERE has been a general feeling that education in this country is too literary, that far too many young men are being educated for academic or clerical occupations, that provision for vocational education has been very small, and that schools and colleges have paid little attention to the needs of industry. Higher education in particular has been subject to such criticism by those interested in industrial development.

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Even in the comparatively highly industrialized province of Bombay, there were in 1941-2 only 264 graduates in the Faculty of Technology: 192 in Engineering, 20 in Chemical Technology and 52 in Agriculture, the total number of graduates being 5,100. It will be noted incidentally that the University of Bombay does not yet offer degree courses in textile manufacture, which constitutes the premier industry of the province. Our backwardness in technical education is part of the larger political problem. For generations the main object of education in the lower stages was to secure a minimum of literacy and in the higher stages to make such literacy more advanced and competent from the point of view of governmental needs. In the absence of a positive and vigorous policy of planned and large-scale industrialization, any progress in technical education was until recently of a sporadic and casual character.

Historical

In their Dispatch on education in 1854 the Court of Directors of the East India Company asked the Government of India to consider how useful and practical knowledge suited to every standard of life could be best conveyed to the great mass of the people, but the creation of the first institutions in India imparting vocational training was directly concerned with the needs of the Public Works and other Government Departments. Four engineering colleges at Roorkee, Poona, Madras and Calcutta were established between 1856 and 1858, and these offer degree courses in Civil, Mechanical, and Electrical Engineering, besides diploma and other courses for lower grades of employment in Government and other engineering departments. More engineering colleges at Benares, Lahore, Karachi, Patna, Bangalore, Hyderabad, Trivandrum and elsewhere have since come into existence. With a munificent endowment from the late J. N. Tata, the

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Indian Institute of Science was opened in 1911 for post-graduate teaching and research in pure and applied chemistry, biochemistry and electrical technology. Departments of applied chemistry or chemical technology have now been instituted in several of the universities, the largest and best-equipped being the Department of Chemical Technology of the Bombay University, which has at present two sections of Textile Chemistry and Chemical Engineering and will shortly have additional sections of 'Intermediates and Dyes', 'Pharmaceuticals and Fine Chemicals', 'Plastics, Paints and Varnishes', 'Oils, Fats and Soaps', and 'Foods and Drugs'. The Harcourt Butler Technological Institute and the Imperial Institute of Sugar Technology at Cawnpore carry out post-graduate teaching and research in oil technology and sugar technology.

Technical Institutes

It is usual to classify industrial workers as belonging to three grades: directing or managerial, supervisory (foremen, chargehands, etc.) and operative (skilled and semi-skilled workmen). The number of persons of the first grade is necessarily very small in an industrial undertaking and, while a multiplication and expansion of technical colleges, such as those mentioned, will be desirable for meeting the growing need for specialists, the training of men who would occupy the directing positions in industry is receiving more or less adequate attention. Turning to the education of men in the second category, there have been notable developments during the last fifty years. Technical training of a standard lower than the usual university degree requirements, but of a more practical character, is available in several institutes spread over the country, such as the Victoria Jubilee Technical Institute in Bombay, the Kala Bhavan Technical Institute at Baroda, the Government Central Tex-

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tile Institute and Leather Working School at Cawnpore, the Central Wood Working Institute at Bareilly, the Textile Institutes at Serampore and Bangalore, and the Government Dyeing School at Shahdara near Lahore. The Delhi Polytechnic is the latest addition to the list, representing the implementation of one of the major recommendations in the Abbott-Wood Report (1937). The products of these institutions have rendered valuable service in industry, have demonstrated that the Indian student trained in school or college can do manual work and stand the monotony and drudgery of factory life, and have dispelled the mistaken notion of industrial employers that the educated Indian youth will not take his coat off and get down to a job of work. Training in an academic institution, however well equipped it may be, can only be preparatory; it can lay no claim to produce experts who can immediately proceed to take charge of plant and processes. Apprenticeship in a factory for a few months as part of the requirements for a degree or diploma gives an insight into industrial operations, but 'sandwich' or co-operative systems, in which the student alternates between the technical institute and the factory, may be adopted with advantage. The training in works should be so planned that it has educational value and is closely correlated with the theoretical instruction imparted in the institute.

Industrial Schools and Junior Technical Institutes

The primary object of industrial schools is to train skilled craftsmen for minor or cottage industries like weaving, carving, leather work, metal work and wood work, while the institutions for training skilled workmen for organized industry may be classified as junior technical institutes. There is, however, no sharp distinction in scope or functions. Many schools and institutes of this type have been created and are in general doing useful work. In the province of

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Bombay alone, there are over 80 technical institutions catering for a very wide variety of industrial occupations. Since the Abbott-Wood Report has dealt in detail with junior-grade vocational education, it would suffice to indicate within the brief compass of this note the problems which appear to us to need urgent examination.

The relative positions of cottage and large-scale industries must be submitted to close scrutiny in their relation to technical education. Having regard to the fact that the agricultural population is not fully occupied for nearly half the year and that the handicrafts which constitute a part of the national tradition of art and craft deserve every encouragement, there must be provision for sound and effective technical education which will enable the cottage worker to obtain the maximum return for his labour. The methods in vogue in France and Japan may be taken into account. On the other hand, the limitations of small-scale industries in a competitive world must not be overlooked.

Standardization and Size of Training Units

We have too many schools and colleges undertaking technical education in comparison with the number of pupils trained, the subjects studied and the total expenditure. It is very desirable that there should be more 'doing' and less 'learning' in schools and colleges, and if workshop practice or machine drawing is introduced as an addition to existing courses of instruction on account of the intrinsic educational value of such training, it is a step in the right direction; but it is an entirely different matter for a school or college, normally equipped for teaching the ordinary arts and science courses, to set up a 'technical institute' as a new and separate department and offer a diploma in a single and very limited branch of technology. The general awakening in the country regarding industrial development has led some of the colleges

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in Bombay, for instance, to embark on technical education in this manner in their desire to keep abreast of industrial progress and to open wider avenues of employment for their students. In the long run the multiplication of such 'technical institutions' will have an adverse effect on technical education in general. This is equally true, and for very similar reasons, of the numerous technical and vocational schools and institutes which are being created, and which in many cases have provision for training only a small number of students in a single and strictly circumscribed vocation. Their finances are usually poor, and so in consequence must be their facilities by way of staff and equipment. In the province of Bombay, for instance, the Victoria Jubilee Technical Institute with its excellent laboratories, workshops and staff is at one end of the scale, and there is a sharp decline as one proceeds to the other institutions, and even among the latter as a class there is a wide variation in standards. Controlling bodies, such as the Committee of Direction for Technical Education in Bombay, might be able to effect some measure of standardization, but the real remedy is to overhaul the entire system. A polytechnic has many advantages over a monotechinic, although the latter may be occasionally justified for purposes of intensive specialization in an industry of major importance (e.g. textiles). The reasons are so many that only a brief indication is possible here. The various branches of technology have essential correlations, and the utmost efficiency in training and economy in expenditure can only be obtained by limiting the number of institutions in a large area and by each of these providing for training in as many technical subjects as possible. Narrow specialization may be necessary in the more advanced stages and during actual employment in industry, but the general training must be broad-based on a fundamental knowledge of science and

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engineering. Apart from this need for a substantial part of the training being common for all technicians, irrespective of the particular industrial occupation they propose to pursue later, a great polytechnic has the ideal environment and atmosphere for the education of boys who are later to enter an organized industry and also to be good citizens. Technical education should not be merely regarded as the mechanism by which a boy is trained for employment, but as a process by which he is fitted for a certain way of life in which, in addition to technical knowledge of a chosen craft or manufacture, he has to exhibit personal qualities of honesty, patience, courage and the ability to work in happy comradeship with varied types of men and women. There should also be opportunities for developing initiative and the other characteristics that might enable the few having natural advantages to rise to positions of leadership in industry.

By means of evening classes or part-time work during the day by arrangement with factory managers, it should be possible for operatives and technicians, who are earning their livelihood, to improve their technical knowledge and qualifications so that they may aspire to move higher from grade to grade. A feature of our educational system is its rigidity and, so far as technical education is concerned, there should be as far as practicable a continuous and unbroken chain from elementary technical training to the most advanced stages of technological education. If there are alternative doors of admission to courses of study, leading to 'external' degrees or diplomas, persons who are compelled to take up industrial employment early in life for economic reasons, but have ability and ambition, would not suffer from a sense of frustration and denied opportunities.

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Vocational Guidance

At each successive stage of school and college education a student is faced with the problem of the next step he has to take, and he tends to follow the line of least resistance. He often drifts from one stage to what is nearest at hand, and is left without guidance on the occasions of his life when he most needs it. If the industrial employer is to obtain workers who are appropriate to their tasks by virtue of temperament and training, such vocational selection would only be possible if the future recruits to his industry had the necessary vocational guidance. Greater publicity regarding the industries in the neighbourhood, the openings likely to be offered, the nature of the work in each case, and the facilities for training that are available is a desideratum. Close and continual contact between headmasters of schools, the heads of technical institutions and industrial employers is also necessary.

General Education

The foundation on which the entire structure of technical education, whether it is of the operative, supervisory or managerial grade, is to be built is elementary general education, and this is without doubt unsound and inadequate. Primary and secondary school education in the country needs revision, reorganization, and all-round improvement. With the remuneration of our primary schoolmasters being not infrequently lower than that of domestic servants, the profession has no permanent attraction for men with the requisite qualities. No reflection is intended on the vast body of men who are rendering important national service under difficult circumstances, but not even the best of them can put his heart into his work or resist the temptation to take the first opportunity of changing his profession to one which gives him a living wage. Other aspects of primary

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school education, such as the advantages of staffing infant classes by trained women, the excessive time spent in 'immobile study' and the mistaken concentration on mere literacy, have been discussed in the Abbott-Wood Report, and call for careful consideration.

The Teaching of English

After Lord Macaulay's famous Minute, English was for a century the medium of instruction in schools and colleges. More recently the drawbacks in learning art and science through a foreign language have been realized, and in most provinces teaching up to the fourth or fifth standard is in the regional language; it is also open to a candidate for the Matriculation to take his examinations in his own language or in English. The teaching of English itself continues, however, to be extremely unsatisfactory. Taught by men who have been brought up on a similar irrational and top-heavy system, students at school and college wade through Goldsmith, Carlyle, Shakespeare, Milton and Keats, and at the end of it are usually unable to write a few sentences of simple, clear and correct English. One is forced to conclude that the essential object of the prevailing system of English teaching is the deliberate production of *babus*. Although one may regard as too sweeping Mahatma Gandhi's condemnation that English education has emasculated us, constrained our intellect, and the manner of imparting this education has rendered us effeminate, no process in our educational technique is so wasteful as the teaching of English, and drastic reform is urgently needed. The inability to express ideas and results in a brief and businesslike manner has been a serious handicap for the Indian technician. After two or three years of study it should surely be possible to have a good working knowledge of English, adequate for the purposes of technical employment.

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Scientific and Technical Terminology in the Indian Languages

If technical education is to be really widespread and to conform to the needs of industry, the problem of teaching technical subjects in the modern Indian languages should be solved without further delay. Although the question has been receiving some attention for over a century, the earliest attempt to lay down principles for a scientific terminology in an Indian language having been made as far back as 1830 by the Translation Society of the old Delhi College, no scheme embracing the whole of the country and all the regional languages has yet been adopted. There are at least three schools of thought in this matter: (i) wholesale adoption of English terminology in all scientific writings in all Indian languages; (ii) inclusion of a limited vocabulary of basic and internationally accepted words and expressions in their English forms, and the use, with fresh coining if necessary, of suitable equivalents in the various languages; and (iii) with the exception of recognized international nomenclature and notation (as in chemistry or botany), the adoption of entirely indigenous systems of terminology, which may be two or three in number, dividing the Indian languages into two or three groups, such as Indo-Aryan and Dravidian; or Sanskritic, Perso-Arabic and Dravidian. Schemes involving modifications and compromises have also been suggested. We have given no special thought to this subject, but after a perusal of the Report of the Central Advisory Board of Education in 1940, we are inclined to favour the procedure now adopted in the Osmania University. Briefly, it would involve our borrowing the essential international elements of scientific terminology from English, and the evolution, making the fullest use of current and commonly understood expressions, of a national scientific terminology. Until such time as we have a single national language, the latter must

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exist in two or three forms represented by the two or three main groups into which our languages may be divided. What we wish to urge here is the urgent need for concrete action in this regard. As a result of the war and as part of the rising tide of national consciousness, our industries are bound to expand in the immediate future, but the ultimate chances of their survival in the face of world competition will depend on the increased efficiency of the operative grade of industrial workers more perhaps than on any other single factor. Survival will only be possible if industrial labour, down to the lowest grade, has a certain minimum of general education and scientific knowledge with special reference to the relevant industry, for which in turn the existence of textbooks and teaching facilities in the major Indian languages is essential.

Technical Education, Industry and the State

While there has been in recent years some progress in technical education, specially in its more advanced technological aspects, the main defect is the lack of a planned and co-ordinated effort on the part of the three agencies concerned—educational authorities, industry and the state. Industrial development has been slow, halting and haphazard. The basic or key industries, such as the heavy chemical, coal-tar, chemical plant and engineering industries, have not advanced on a scale commensurate with our requirements or our national resources. To limit technical education to the exact demands of industry at a given time would be to take too narrow a view of the aim and scope of technical education; on the other hand there is little to be gained by training for unemployment, in whose wake will follow discontent and demoralization. It is a vicious circle, from which the only escape is a realization of the organic relations between industry, education and the state. Our model must

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be Russia, whose position when the Soviet Government took over was in many ways very similar to ours at the present time. The three five-year plans and the methods by which science, industry, education and the state were integrated (cf. Edelman, *How Russia Prepared*; Crowther, *Science in Soviet Russia*, etc.) must be studied and adopted with such modifications as may be necessary to suit our special conditions. At the end of the second five-year plan in 1937, large-scale industry in Russia had attained over 400 per cent of the 1929 output. In the third five-year plan, interrupted by the war, there was further expansion in the technical reconstruction of the national economy, improvement in the organization and technology of production, extensive introduction of scientific discoveries and inventions, strengthening of labour discipline, and high labour productivity. An extensive system of schools and training courses for workers and technicians was promoted, and provision was made for the graduation of 14,000,000 technicians and 600,000 specialists. Measures were taken for raising the level of the cultural and technical education of workers to that of engineers and technicians. Universal secondary education was to be introduced in the cities, and universal junior secondary education (seven years), accompanied by an extension to ten years of secondary education, in rural areas. In the scale and intensity of the organized effort made in Russia, she has been in advance of other countries, and nowhere has there been such effective integration of industry, technical education and the state. The growth of technical education in this country must similarly be a part of social, economic and political planning, if the standard of living of the mass of the population is to be raised within a reasonable time to the minimum of civilized existence.



